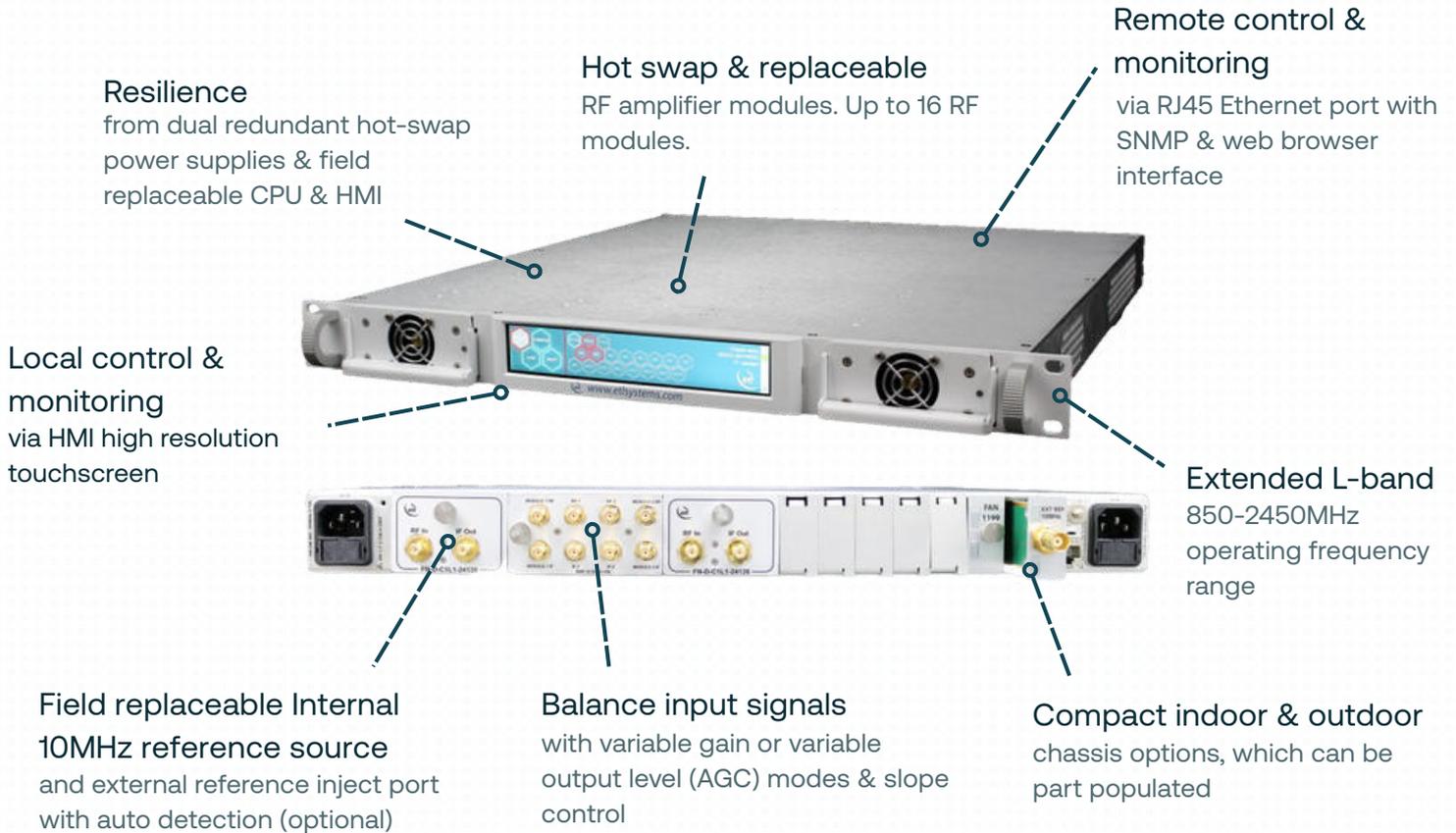


Alto S-band Smart Amplifier Module

with low noise, high linearity, variable gain and slope control

The S-Band low noise amplifier module is designed to work in the Genus 1U chassis series, operating over 850-2450 MHz. The module has low noise, high linearity, +45 to -4 dB variable gain with variable slope control. The chassis has the capacity for up to 16 amplifier modules, or can house a mixture of other hot-swap module types.



Chassis Specification	
Dimensions/Weight/Colour	1U high x 550mm deep x 19" wide / <10kg / RAL9003 - white (semi-matte)
Capacity	17 module slots. Note: Actual modules may require >1 slot. Refer to required module spec table.
Temperature	Operating: 0°C to +45°C Storage: -20°C to +75°C
Location/Humidity/Altitude	Indoor use only / 20 to 90% non-condensing / 2,000m AMSL (Operational) 8,000m AMSL (Storage) Above Mean Sea Level
Control & Monitoring	Local: HMI, capacitive touch screen Remote: Ethernet via RJ45, 10BaseT/100 BaseTx. ETL TCP/IP, SNMPv2/3, HTTPS & built-in web server. HMI and CPU field replaceable.
MTTR	20 minutes (15 minutes to retrieve spare part and 5 mins to replace). Applies to LRUs only and assumed in-house stock.
AC Input/Consumption	85-264Vac 50/60Hz / 275W max. consumption at steady state
PSU Redundancy	Dual redundant and alarmed. Diode OR. Hot swappable.
Input & Output Ports	Dependant upon module fitted



Smart Amplifier Module

Compact form factor allows multiple modules to be housed in the 1U GENUS chassis. Each module occupies 1 slot in the chassis.

High linearity ensures overall RF gain signal performance is optimised.

Low noise for prime signal quality.

RF Parameters		
Model Numbers	ALT-G1S-S3-106	
Frequency Range	850 - 2450 MHz	
Size	1 slot wide	
RF Ports	50 Ohm SMA or N-type	
Gain	38 ± 2 dB max. 0 ± 2 dB min.	
Gain Flatness	850 - 2450MHz	±0.6
	Any 36MHz	±0.2
Gain Steps	0.25 ± 0.15	
Slope Control Range	0 to 8 dB. Pivot point is at 2450MHz	
Slope Control Steps	1 ± 0.25	
Input Return Loss	18 dB typ. 14 dB min.	
Output Return Loss	16 dB typ. 14 dB min.	
Isolation	60 dB typ. 50 dB min.	With amplifiers set at the same gain level. Worst case isolation is between adjacent amps, isolation degrades dB to dB for different gain levels.
Reverse Gain	< -60 dB typ.	
Noise Figure	7.0 dB typ. 5.0 dB max.	At max gain setting
1db GCP	23 dBm typ. 850-2150MHz 20 dBm min. >2150MHz 19 dBm min.	At max gain setting
OIP3	32 dBm typ. 30 dBm min.	At max gain setting
OIP2	44 dBm typ. 40 dBm min.	
In band, signal independent spuri	<-85 dBm max.	Very low level spuri from CPU clock, switch mode PSU and other control electronics inside the chassis.
Maximum Input Level	+20 dBm	For no damage. Non-operational.
MTBF	>150,000 hrs. MTBF of each amp module. These are hot-swap	



Interface, Monitoring & Alarms		
Control Method	Local and remote as provided by selected chassis	
LNB Power	None	
Environmental		
Operating Temperature	-0°C to +50°C	Up to 8 modules in a chassis.
	-0°C to +45°C	Up to 16 modules in a chassis.
Storage Temperature	-20°C to +75°C	
Location	Indoor use only, within parent GENUS chassis	
Humidity	20 to 90% non-condensing, relative humidity	
Altitude	10,000ft / 3,000m above mean sea level	
Physical Dimensions & Parameters		
Weight	<0.35kg typ.	

Note 1: The specification is subject to regular reviews and will be updated from time to time as part of our continuing product development and improved spec accuracy.

Note 2: Operation beyond the quoted limits stated above may cause instantaneous and permanent damage.